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## PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

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on 8-4-2008

Signature [Signature]

Typed or printed name W Richard Purcell Jr

Application Number

10/034,872

Filed

12-28-2001

First Named Inventor

W Richard Purcell Jr

Art Unit

3692

Examiner

Clement B Graham

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☒ applicant/inventor.

☐ assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)

☐ attorney or agent of record.  
Registration number \_\_\_\_\_

☐ attorney or agent acting under 37 CFR 1.34.  
Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

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8-4-2008

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☐ \*Total of \_\_\_\_\_ forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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## Pre-Appeal Brief Conference re 10/034,872

### REMARKS

In the Office Action of 4-29-08, rejection of the independent claims 1 and 71 is based on errors in fact regarding the prior art. Described in a factually correct way, the referenced prior art is fatally deficient as grounds for rejection of claims 1 and 71.

The applicant therefore respectfully requests that the errors in fact regarding the referenced prior art be corrected, the independent claims 1 and 71 be allowed, their dependent claims be allowed, and the application be allowed.

#### Error in fact 1

One of the representations of prior art on which the rejection of claim 1 is based is a representation that in Edesess (5,884,287), analysis of investment probabilities includes time periods of withdrawals from investments to meet goals. This representation is factually wrong. Edesess explicitly excludes such periods from its probability analysis. Evidence of this error in fact is in the record.

**1a. Office Action representation** -- In the rejection of claim 1, Edesess is said to define "a time horizon of a plural number of investment periods from the time of an initial investment *through times of withdrawals for meeting goals* . . . and a final wealth goal at the end of the time horizon." (See Office Action of 4-29-08, page 2, lines 5-9 of "As per claim 1.") Edesess is said to analyze probabilities through that time horizon to that final wealth. (See Office Action of 4-29-08, page 3, lines 3-5.)

**1b. Office Action reference** -- The reference provided for this representation is stated in Office Action of 4-29-08, page 2, lines 9-11 of "As per claim 1." However, this reference shows that the time horizon of Edesess probability analysis *excludes* periods of withdrawals to meet goals, and defines "final wealth" *before* periods of withdrawals. Evidence that the representation is an error in fact was submitted prior to the Office Action, as shown below.

**1c. Earlier applicant remarks** -- In remarks submitted by the applicant before the Final Action, nine specific references to Edesess are provided showing that Edesess probability analysis *explicitly excludes* periods of investment withdrawal to meet goals. (See Request for Reconsideration of 12-8-07, page 5 line 19 through page 6 line 6.)

Relative to the claimed invention, this deficiency alone is sufficient to make the referenced prior art useless, and worse misleading. The claimed invention is intended for individuals investing for lifetime goals, for most of whom the sole or primary purpose is that the investment enable withdrawals for meeting income needs in each of many retirement years. To determine probabilities of meeting these goals, the analysis must include consideration of investment probabilities through those withdrawal periods.

One could argue that the Edesess prior art probability analysis could be extended to include withdrawal years. But Edesess does not do so and the error in fact of representing it as doing so should be corrected; and with this factual correction, for the purpose of the claimed invention Edesess is fatally deficient and misleading. Furthermore, if Edesess were changed to include withdrawal periods in its probability analysis, its method would be incorrect, producing incorrect and misleading results, as described in discussion of error in fact 2 below.

### **Error in fact 2**

Another of the representations of prior art on which the rejection of claim 1 is based is that in Edesess, for each portfolio, analysis of investment probabilities is performed through period-by-period simulation, with a return rate determined for each period based on that portfolio's return-rate probabilities. This representation is an error in fact. Edesess does not apply simulation, instead performing analysis in which all periods have the same return rate. Further, for any plan with investment withdrawals, the Edesess method will produce incorrect results.

**2a. Office Action representation** -- In the rejection of claim 1, Edesess is said to, for each portfolio, develop "*through simulation*, a probability distribution for the final wealth", with "each simulation proceeding *period by period* through the time horizon . . . applying for each portfolio a return rate determined *for that period* based on the portfolio's expected return rate and return-rate standard deviation." (See Office Action of 4-29-08, page 3, lines 3-8.)

**2b. Office Action reference** -- The reference provided for this representation is stated in Office Action of 4-29-08, page 3, lines 14-15." However, this reference shows that Edesess does not apply or even mention simulation, instead using another method based on the same return rate for all periods. And for this return rate, probabilities are determined in a way valid only for amounts kept invested throughout the time horizon. Evidence that the representation is an error in fact was submitted prior to the Office Action, as shown below.

**2c. Earlier applicant remarks** -- In remarks submitted by the applicant before the Final Action, a specific reference is provided showing that Edesess analysis applies the same return rate in every period: an equation with a single return rate "*r*" applied in all periods. (See the Request for Reconsideration of 12-8-07, page 8, the equation just above middle of page.) And near the bottom of the same Remarks page, the key Edesess phrase "over the horizon period" is cited from the Edesess sentence stating that for determining a portfolio's probability of achieving an average return rate, Edesess uses probability for average return rate *for the entire time horizon*. (See Edesess column 5 lines 64-67.)

In the applicant's remarks submitted 12-8-07, before the Final Action, it is shown that for any plan including periods with investment withdrawals to meet goals, such as for income for each retirement year, the Edesess method will understate the uncertainties in future result probabilities, producing results that are incorrectly calculated and dangerously misleading to investors. (See Request for Reconsideration of 12-8-07, middle of page 8 beginning with the

heading "The Edesess no-variation method", through page 10 line 11. *Correction:* there, the reference to Edesess column 5 lines 8-11 should read column 5 line 65.)

Furthermore, by failing to incorporate effects of period-to-period return-rate variation, Edesess overstates probable investment results. For a given return-rate average over multiple periods, period-to-period variations lower the multi-period result. For example, if over two years one investment achieves 10% each year while another achieves 20% one year and 0% the other year, the two investments have the same average return rate for the two years, 10%, but the second investment with the variations produces a lower two-year result: 121% of amount invested for the no-variations investment, 120% for the investment with the variations.

Even when these errors are small for the individual year, over the many years of typical individuals' investments for retirement and other lifetime goals these errors compound to far larger, dangerously misleading errors in result probabilities for the investor's long-term goals.

This deficiency alone is sufficient to make the referenced prior art useless for the claimed invention purpose, and worse dangerously misleading to investors. If applied to investor plans for which the claimed invention is intended, plans including withdrawals to meet goals such as income in retirement years, Edesess would apply the wrong method and produce incorrect assessments that understate uncertainty and overstate probable results.

### **Error in fact 3**

Another of the representations of prior art on which the rejection of claim 1 is based is that the purpose of Edesess is to *inform investors* of investments' probabilistic prospects in *several specific measures for the investors* to make investment selections. This representation is an error in fact. Instead Edesess is designed for *Edesess* to make the investment selection itself, according to a fixed selection rule. Evidence of this error in fact is in the record.

**3a. Office Action representation** -- In the rejection of claim 1, Edesess is said to provide a method for the purpose of "informing investors for judging, selecting, and maintaining informed commitment to investment portfolios with optimal prospects for their long term investment plans, goals, and priorities." And it is said that for this purpose, Edesess provides "a basis for comparing the portfolio plans in various aspects of prospects for the financial plan and goals, including," specifying four aspects including "prospects for period-by-period path of value variation and development through the time horizon." (See Office Action of 4-29-08, page 2 lines 1-4 of "As per claim 1," and page 3 lines 9-14.)

**3b. Office Action reference** – The reference provided for this representation is stated in Office Action of 4-29-08, page 3, lines 14-15." However, this reference shows that Edesess is instead designed for a different purpose: for *Edesess* to make the investor's investment choice, based on a fixed investment selection rule. And it shows that Edesess does not address period-by-period return-rate variation and path of value variation. Evidence that the representation is an error in fact was submitted prior to the Office Action, as shown below.

**3c. Earlier applicant remarks** -- Remarks submitted 12-8-07 show that the representation of Edesess is an error in fact, that Edesess is designed not to inform the investor for his judging, selecting, and maintaining commitment to an investment, but instead for Edesess to make an investor's investment selection according to a fixed Edesess rule. This is shown by the Edesess description of the selection method Edesess imposes to make an investor's investment selection. (See Request for Reconsideration of 12-8-07, page 11 two-thirds of the way down, smaller-font citation from Edesess.) And as shown in 2c on page 2 of these remarks, those earlier remarks of 12-8-07 also show that Edesess fails to consider period-by-period return-rate variation, without which Edesess cannot and does not even consider prospects for period-by-period path of value variation through the time horizon.

Failure to develop information providing a basis for comparing the portfolios in the stated aspects, including prospects for period-by-period path of value variation and development through the time horizon, is by itself sufficient to make the referenced prior art fatally deficient relative to the purpose, method, and utility of the claimed invention. While the intended user's ultimate investment goals are long term, investors' concerns about period-by-period variations are so strong and varied that professional investment advisors are trained to recommend investment selections based largely on the particular investor's attitude toward such variations. An essential purpose and function of the claimed invention is to provide a basis for informing investors of how investments compare in prospects for such variations as well as probabilities for long-term goals so each investor can judge a choice that best fits his goals and priorities, and see in advance what variations may be ahead to maintain a good investment selection. The essential nature of this feature of the claimed invention was described in remarks before the Final Action. (See Request for Reconsideration of 12-8-07, page 13, lines 11-32.)

#### **Error in fact 4**

Another representation of prior art on which rejection of claim 1 is based is that for the step of providing a comparison of the portfolios in probability of meeting the final wealth goal, in view of a reference from Wallman, modification of Edesess teachings to do so would be obvious. But separately or together, methods of Edesess and the Wallman reference provide no such comparison or even the probabilities on which the portfolios are to be compared. This representation is an error in fact. Evidence of this factual misrepresentation is in the record.

**4a. Office Action representation** -- The rejection of claim 1 states that Edesess fails to perform the claimed invention's "providing at least a first comparison of the portfolios . . . (in) probability that the final wealth will meet or exceed the goal" (see Office Action of 4-29-08, page 3, lines 16-22); but with a reference to Wallman states that it would have been obvious to modify the teachings of Edesess to include providing the stated comparison.

**4b. Office Action reference** -- The reference provided for this representation is Wallman column 6 lines 1-65 and column 9 lines 19-65. However, Evidence that this reference to

Wallman and Office Action references to Edesess show the representation to be an error in fact was submitted prior to the Final Action, as described below.

**4c. Earlier applicant remarks** – The Final Action concedes that Edesess does not provide the stated comparison of the portfolios; and as shown in preceding sections of these remarks, remarks submitted before the Final Action show that Edesess does not provide a method for determining the final wealth goal probabilities that are to be compared. And as also stated in remarks submitted before the Final Action, the Wallman reference does not provide the stated comparison of portfolios, nor any comparison of portfolios, nor any method for determining the final wealth goal probabilities to be compared. (See Request for Reconsideration of 12-8-07, page 14, last six lines of section "Wallman does not help.") Separately or together, methods of Edesess and Wallman reference provide neither the stated portfolio comparison nor even the stated portfolio probabilities to be compared.

**Rejection of claim 71 based on same errors in fact as claim 1**

While claim 1 relates to method and claim 71 to apparatus, rejection of claim 71 is based on the same errors in fact regarding the referenced prior art, and all of the preceding remarks are hereby applied to claim 71 with the following page references in the Office Action of 4-29-08: Error in fact 1, page 16 lines 8-13; error in fact 2, page 16 lines 24-29; error in fact 3, page 16 line 30 through page 17 line 6; and error in fact 4, page 17 line 7 through page 18 line 17.

**Summary**

For the claimed invention it is essential that the analysis of probabilities (a) include periods of investment withdrawal, because most intended users invest for the purpose of withdrawals to meet income needs in retirement years; (b) incorporate effects of period-to-period return-rate variations, because such variations increase uncertainties and lower expectations for goal results; and (c) produce results to inform investors of how the portfolios compare in several probabilistic measures, including prospects for period-by-period value variation as well as (d) a comparison of the portfolios in probability of meeting or exceeding the final wealth goal, for the investor's selection and commitment to a portfolio the investor considers optimal for his plan, goals, and priorities. The rejection is based on representations that the referenced prior art has all these characteristics, but for each the representation is an error in fact.

Therefore the errors in fact should be corrected, the independent claims 1 and 71 which were rejected based on errors in fact should be allowed, the dependent claims allowed, and the application allowed. The applicant respectfully requests that these steps be taken.

Respectfully submitted,

Date: 8-4-2008

  
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W. Richard Purcell, Jr.